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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,250	12/05/2001	Russell J. Wilcox	H-313	8322

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EXAMINER
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LY, NGHI H

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 04/13/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/683,250

Applicant(s)

WILCOX ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 26, 32 and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyashita (US 6,327,482).

Regarding claims 1, 32 and 47, measured diagonally teaches a portable electronic device (see fig.1) having an internal screen for the display of information (see fig.1, 9a), the electronic device also having an external screen arranged to receive information from the electronic device (see fig.1, connection between 8 and 10) and being capable of displaying the information on an electro-optic medium (column 2, lines 10-24, see "LCD").

Regarding claims 2, Miyashita teaches a portable electronic device comprising a cellular telephone (see abstract).

Regarding claim 26, Miyashita further teaches the external screen is detachable from the portable electronic device (see Abstract).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4-12, 24 and 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482).

Regarding claims 4-12, 35, 37 and 38, Miyashita teaches a portable electronic device according to claim 1. Miyashita does not specifically disclose the external screen has a larger number of pixels than the internal screen in at least one dimension or in both dimensions or it has a resolution of at least 320 by 240 or it has a resolution of at least 640 by 480, or it is measured diagonally from about 2 to about 14 inches, or it is from about 4 to about 10 inches in size, or it has a thickness not greater than about

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one half inch, or it has a thickness not greater than about one quarter inch, or it has a weight not greater than about 6 ounces or the visual indicator covers an area of at least about 1 cm<sup>2</sup> or the visual indicator covers at least about 5 per cent of the external surface of the cellular telephone or the external surface of the cellular telephone comprises at least three separate surfaces and the visual indicator is present on at least two of the separate surfaces.

However, such the external screen has a larger number of pixels than the internal screen in at least one dimension or in both dimensions or it has a resolution of at least 320 by 240 or it has a resolution of at least 640 by 480, or it is measured diagonally from about 2 to about 14 inches, or it is from about 4 to about 10 inches in size, or it has a thickness not greater than about one half inch, or it has a thickness not greater than about one quarter inch, or it has a weight not greater than about 6 ounces or the visual indicator covers an area of at least about 1 cm<sup>2</sup> or the visual indicator covers at least about 5 per cent of the external surface of the cellular telephone or the external surface of the cellular telephone comprises at least three separate surfaces and the visual indicator is present on at least two of the separate surfaces could have been determined by the inventor's needs e.g., use a larger number of pixels than the internal screen in at least one dimension or in both dimensions or it has a resolution of at least 320 by 240 or it has a resolution of at least 640 by 480, or it is measured diagonally from about 2 to about 14 inches, or it is from about 4 to about 10 inches in size, or it has a thickness not greater than about one half inch, or it has a thickness not greater than about one quarter inch, or it has a weight not greater than about 6 or the

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visual indicator covers an area of at least about 1 cm<sup>2</sup> or the visual indicator covers at least about 5 per cent of the external surface of the cellular telephone or the external surface of the cellular telephone comprises at least three separate surfaces and the visual indicator is present on at least two of the separate surfaces which can improve the image on the screen and reduce the weight of the portable electronic device.

Regarding claim 24, Miyashita teaches a portable electronic device (see fig.1), instead of the portable electronic device is arranged to act as a universal serial bus master and the external screen as a universal serial bus slave or functions as both a cellular telephone and a portable digital assistant as claimed.

However, using the portable electronic device is arranged to act as a universal serial bus master and the external screen as a universal serial bus slave or functions as both a cellular telephone and a portable digital assistant is known in the art.

Therefore, it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Miyashita in order to improve the portable electronic device is arranged to act as a universal serial bus master and the external screen as a universal serial bus slave or functions as both a cellular telephone and a portable digital assistant.

Regarding claims 36 and 40, Miyashita further teaches the visual indicator is provided on the external surface of the cellular telephone (see fig.1, 5c).

Regarding claim 39, Miyashita further teaches a cellular telephone according to claim 38 having a substantially cuboidal form with a front surface bearing a key pad (see fig.1), an opposed rear surface, and at least two side opposed surfaces and two

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opposed end surfaces extending between the front and rear surfaces (see fig.1), and wherein the visual indicator is present on the rear surface and an opposed pair of the side and rear surfaces (see fig.1, 5c).

6. Claims 3, 13-23, 25 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482) in view of Peuhu et al (US 6,311,076).

Regarding claim 3 and 25, Miyashita teaches a portable electronic device according to claim 1. Miyashita does not specifically disclose a portable electronic device comprising a personal digital assistant.

Peuhu teaches a portable electronic device comprising a personal digital assistant (column 2, lines 37-41, see "PDA").

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Peuhu to the system of Miyashita so that more information can be provided to the user.

Regarding claim 13, Miyashita teaches a portable electronic device according to claim 1. Miyashita does not specifically disclose the external screen is flexible.

Peuhu teaches the external screen is flexible (see column 2, lines 50-59).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Peuhu to the system of Miyashita in order to reduce weight, size and increase display area (see Peuhu, column 1, lines 37-39).

Regarding claim 14, the combination of Miyashita and Peuhu further teaches a portable electronic device having a housing and wherein the external screen is movable between a retracted position (see and compare fig.1 with fig.2 of Peuhu), in which less than the full display area of the external screen is displayed, and an extended position (see and compare fig.1 with fig.2 of Peuhu), in which substantially the full display area of the external screen is displayed, the external screen extending a greater distance from the housing in its extended position than in its retracted position (also see and compare fig.1 with fig.2 of Peuhu).

Regarding claim 15, the combination of Miyashita and Peuhu further teaches a portable electronic device in its retracted position, a major portion of the external screen lies within the housing (see Peuhu, fig.1, the external screen in its retracted position, a major portion of the external screen lies within the housing).

Regarding claim 16, the combination of Miyashita and Peuhu further teaches a portable electronic device in its retracted position, the external screen has the form of a scroll wound around a rotatable member (see Peuhu, fig.3).

Regarding claim 17, the combination of Miyashita and Peuhu further teaches a portable electronic device in its retracted position, the external screen has a folded (see Peuhu, column 6, lines 31-34).

Regarding claims 18 and 19, the combination of Miyashita and Peuhu teaches a portable electronic device further comprising at least one support member arranged to support the external screen in its extended position (see Peuhu, fig.6, edge region 17).



Regarding claim 20, the combination of Miyashita and Peuhu further teaches the external screen is arranged to draw power from a battery located within the portable electronic device (the teaching of Miyashita and/or Peuhu inherently teaches the external screen is arranged to draw power from a battery located within the portable electronic device).

Regarding claims 21 and 49, the combination of Miyashita and Peuhu further teaches the external screen is provided with at least one manually-operable data input means (see Peuhu, column 3, lines 57-67).

Regarding claim 22, the combination of Miyashita and Peuhu further teaches the data input means comprises at least one push button (see Miyashita, fig.1, function keys 6).

Regarding claim 23, 50 and 51, the combination of Miyashita and Peuhu teaches touch-sensitive elements (see Peuhu, column 4, lines 1-5) instead of a pointing device (trackball) *or* the external display comprises at least one push button as claimed. However, using a pointing device (trackball) *or* the external display comprises at least one push button is known in the art.

Therefore, it would have been obvious to one of the ordinary skill in the art to modify the above teaching of Peuhu and Miyashita in order to improve the pointing device *or* the external display comprises at least one push button.

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7. Claims 27- 31 and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482) in view of Wen et al (US 5,975,680).

Regarding claims 27- 31 and 42-46, Miyashita teaches claim 1. Miyashita does not specifically disclose the electro-optic medium comprises an electrophoretic medium *or* a rotating bichromal member medium *or* the electrochromic medium is a nanochromic film comprising an electrode formed at least in part from a semi-conducting metal oxide and a plurality of dye molecules capable of reversible color change attached to the electrode.

Wen teaches the electro-optic medium comprises an electrophoretic medium *or* a rotating bichromal member medium *or* the electrochromic medium is a nanochromic film comprising an electrode formed at least in part from a semi-conducting metal oxide and a plurality of dye molecules capable of reversible color change attached to the electrode (see column 1, lines 25-43 and see column 2, lines 55-60).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Wen to the system of Miyashita in order to provide accurate placement of color display pixel element corresponding to the correct colors (see Wen, column 2, lines 1-5).

8. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482) in view of Larsen et al (US 6,381,468).

Regarding claims 33 and 34, Miyashita teaches the electro-optic medium (see fig.1). Miyashita does not specifically disclose the electro-optic medium is arranged to

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change repeatedly between the at least two different display states when a call is received by the telephone.

Larson teaches the electro-optic medium is arranged to change repeatedly between the at least two different display states when a call is received by the telephone (see column 5, lines 58-62).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Larsen to the system of Miyashita in order to identify the calling phone by phone number or name code (see Larson, column 5, lines 62-65).

9. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482) in view of Kaplan (US 6,032,039).

Regarding claim 41, Miyashita teaches the visual indicator (see fig.1, 5c). Miyashita does not specifically disclose an audible indicator means for indicating when a call is received by the telephone, and selector means whereby a user may select operation of either the visual indicator means or the audible indicator means when a call is received by the telephone.

Kaplan teaches an audible indicator means for indicating when a call is received by the telephone, and selector means whereby a user may select operation of either the visual indicator means or the audible indicator means when a call is received by the telephone (see column 7, lines 32-35).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Kaplan to the system of Miyashita so that the user can select one of these choices and provide appropriate indication.

10. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita (US 6,327,482) in view of Shim et al (US 6,640,113).

Regarding claim 48, Miyashita teaches the electro-optic medium (see fig.1). Miyashita does not specifically disclose an external display wherein the data transmission means comprises a flexible cable.

Shim teaches an external display wherein the data transmission means comprises a flexible cable (see column 2, lines 43-67).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the above teaching of Shim to the system of Miyashita in order to allow the touch sensitive display to be fully extended out of its slot and to be angularly rotated relative to the radio telephone (see Shim, column 2, lines 51-54)

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Yamamoto (US 6,297,945) teaches portable electronic terminal apparatus having a plurality of displays.

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- b. Gioscia (US 6,577,496) teaches non-rigid mounting of a foldable display.
- c. Lang (US 4,948,232) teaches device for the presentation of information with rollable plastic substrate.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

*NHL*  
04/05/04

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